UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,095	01/23/2004	Douglas Durham	15436.163.1	8239

22913 7590 08/09/2007

WORKMAN NYDEGGER
(F/K/A WORKMAN NYDEGGER & SEELEY)
60 EAST SOUTH TEMPLE
1000 EAGLE GATE TOWER
SALT LAKE CITY, UT 84111

EXAMINER
PASIA, REDENTOR M

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
08/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/764,095	DURHAM ET AL.	
	Examiner	Art Unit	
	Redentor M. Pasia	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/23/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show "communication system 100" as described in the specification in page 14, Par. 0037. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claims 30-40 recite the claim limitation "computer program product". There is insufficient antecedent basis for this limitation in the specification.

The disclosure is objected to because of the following informalities:

In Par. 0038 page 15, *"...Fiber Channel link "1"22 connects..."* should be corrected to *"...Fiber Channel link 122 connects..."*

In Par. 0039 in page 15, "The SONET link 1120 is particularly..." should be corrected to "The SONET link 120 is particularly..."

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F:2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 6-14, 20-40 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9-10 of copending Application No. 10/764218 in view of Strong (US 2004/0049706 A1; hereinafter Strong).

As to claim 6 of the application, claim 9 of the copending application, 10/764218, shows a method of processing data events associate with a multi-protocol communications system (claim 9, page 31), the method comprising: capturing a plurality of data events, the captured data events collectively representing a plurality of communications protocols (claim 9, page 31); and timestamping at least some of the captured data events, each timestamp being based upon the reference clock (claim 9, page 31). However, claim 9 of the copending application does not show the step of transmitting a reference clock having a frequency that is based upon a plurality of communications protocol clock frequencies associated with the multi-protocol communications system, the reference clock frequency being different from each of the communications protocol clock frequencies. Also, claim 9 of the copending application furthers show a step of sorting at least some of the captured data events according to the respective clock timestamps associated with each of the captured data events; and displaying at least some of the sorted data events by way of a graphical user interface

such that a temporal relationship between at least two of the displayed data events is apparent from the display.

Strong shows the step of transmitting a reference clock having a frequency that is based upon a plurality of communications protocol clock frequencies associated with the multi-protocol communications system, the reference clock frequency being different from each of the communications protocol clock frequencies (Par. 0029, 0031, 0041-0042). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method as mentioned in claim 9 of the copending application by adding the step of transmitting a reference clock as discussed above by Strong and also, by removing the sorting step and the displaying of sorted data events as discussed above by claim 9 of the copending application in order to synchronize different links in a network and also to conserve system/network resources.

As to claim 10, claim 10 of the modified copending application shows the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and, PCI Express (page 31, claim 10).

As to claim 20 of the application, claim 9 of the copending application, 10/764218, shows a method of processing data events associate with a multi-protocol communications system (claim 9, page 31), the method comprising: capturing a plurality of data events, the captured data events collectively representing a plurality of

communications protocols (claim 9, page 31); and timestamping at least some of the captured data events, each timestamp being based upon the reference clock (claim 9, page 31). However, claim 9 of the copending application does not show a multi-link protocol analyzer having a plurality of link analyzers that collectively represent a plurality of different communication protocols and corresponding clock frequencies and the step of transmitting a reference clock having a frequency that is based upon a plurality of communications protocol clock frequencies associated with the multi-protocol communications system, the reference clock frequency being different from each of the communications protocol clock frequencies. Also, claim 9 of the copending application furthers show a step of sorting at least some of the captured data events according to the respective clock timestamps associated with each of the captured data events; and displaying at least some of the sorted data events by way of a graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

Strong shows a multi-link protocol analyzer having a plurality of link analyzers that collectively represent a plurality of different communication protocols and corresponding clock frequencies, a method for processing data events associated with a multi-protocol communications system (Figure 1 and 2; Par. 0011-0013; abstract); and the step of transmitting a reference clock having a frequency that is based upon a plurality of communications protocol clock frequencies associated with the multi-protocol communications system, the reference clock frequency being different from each of the communications protocol clock frequencies (Par. 0029, 0031, 0041-0042). It would

have been obvious to one of ordinary skill in the art at the time of the invention to modify the method as mentioned in claim 9 of the copending application by adding a multi-link protocol analyzer; adding the step of transmitting a reference clock as discussed above by Strong and also, by removing the sorting step and the displaying of sorted data events as discussed above by claim 9 of the copending application in order to synchronize different links in a network and also to conserve system/network resources.

As to claims 24, 30 and 34 of the application, these claims are rejected on the same reasoning used in the rejection of claims 10, 20, 10 of the application, respectively.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 30-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter on the basis of nonfunctional descriptive material.

Claims 30-40 shows the claim limitation *"A computer program product "* in line 1.

In claim 30-40, "computer program product" is computer program claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs (i.e. machine readable instructions) do not define any structural and functional interrelationships between the computer program (i.e. machine readable instructions) and other claimed elements of a computer, which permit the computer program's functionality to be realized. Thus, the claim is non-statuary.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> **A person shall be entitled to a patent unless –**
>
> **(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.**

Claims 1-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Strong (US 2004/0049706 A1; hereinafter Strong).

As to claim 1, Strong shows a method for defining a common time base suitable for use in connection with the operation of a multi-link protocol analyzer in a multi-protocol communication system (abstract, Par. 0011-0012), the method comprising: determining a clock frequency for each of a plurality of transmission protocols associated with the multi-protocol communication system (Par. 0011-0012, 0041-0042; clock 204); and using the plurality of communications protocol clock frequencies as a basis for determining a frequency of a reference clock, where the reference clock frequency is different from each of the communications protocol clock frequencies (Par. 0041-0042; multiplied clock signal/ time stamp clock).

As to claim 2, Strong shows that wherein using the plurality of communications protocol clock frequencies as a basis for determining a reference clock frequency comprises selecting a reference clock frequency that is an integer multiple of each of the plurality of communications protocol clock frequencies (Par. 0031, 0042-0043).

As to claim 3, Strong shows that wherein using the plurality of communications protocol clock frequencies as a basis for determining a reference clock frequency comprises selecting a reference clock frequency that is higher than any of the plurality of communications protocol clock frequencies (Par. 0031, 0042-0043).

As to claim 4, Strong shows that wherein the plurality of communications protocols includes at least one of the following communications protocols: Fibre Channel (Par. 0026).

As to claim 5, using the reference clock as a basis to determine at least one of the following: relative timing of selected data events concerning the multi-protocol communications system (Par. 0042; multiplied clock signal is also referred to as time stamp clock).

As to claim 6, Strong shows a method of processing data events associate with a multi-protocol communications system (abstract), the method comprising: transmitting a reference clock having a frequency that is based upon a plurality of communications protocol clock frequencies associated with the multi-protocol communications system, the reference clock frequency being different from each of the communications protocol clock frequencies (Par. 0029, 0031, 0041-0042); capturing a plurality of data events, the captured data events collectively representing a plurality of communications protocols (0011-0012; 0054); and timestamping at least some of the captured data events, each timestamp being based upon the reference clock (Par. 0009, 0011-12, 0042).

As to claim 7, Strong shows that the reference clock frequency comprises a frequency that is an integer multiple of each of the plurality of communications protocol clock frequencies (Par. 0042).

As to claim 8, Strong shows the reference clock frequency comprises a frequency that is higher than any of the plurality of communications protocol clock frequencies (Par. 0042).

As to claim 9, Strong shows at least two of the plurality of communications protocols are unsynchronized with respect to each other (Par. 0008, 0011-0013).

As to claim 10, this claim is rejected for the same reasoning as set forth in the rejection of claim 4.

As to claim 11, Strong shows the timestamps are assigned to captured date events using clock boundaries of the reference clock (Figure 4).

As to claim 12, this claim is rejected for the same reasoning as set forth in the rejection of claim 5.

As to claim 13, Strong shows a step of receiving the reference clock (Par. 0042-0043)

As to claim 14, Strong shows a step of generating the reference clock (Par. 0042).

As to claim 15, Strong shows a protocol analyzer (100) configured for use in connection with processing data events associated with a multi-protocol communications system (abstract), the protocol analyzer comprising: a first link analyzer configured to receive data from a first communication link (110-140; Par. 0029-0030); and a second link analyzer in at least indirect communication with the first link analyzer and configured to receive data from a second communication link (Figure 1-2), each of the first and second link analyzers also being configured to receive and transmit a trigger and a reference clock, and each of the first and second link analyzers further being configured to timestamp data in association with the reference clock (Figure 2; Par. 0033-0034, 0042-0043).

As to claim 16, Strong shows at least one of the link analyzers is configured to generate the reference clock (Par. 0042).

As to claim 17, Strong shows at least one of the link analyzers is configured to generate the trigger (Par. 0033).

As to claims 18 and 19, these claims are rejected for the same reasoning as set forth in the rejection of claims 2 and 3, respectively.

As to claim 20, Strong shows that in a multi-link protocol analyzer having a plurality of link analyzers that collectively represent a plurality of different

communication protocols and corresponding clock frequencies, a method for processing data events associated with a multi-protocol communications system (Figure 1 and 2; Par. 0011-0013; abstract), the method comprising: transmitting a reference clock having a frequency that is based upon the plurality of communications protocol clock frequencies associated with the plurality of link analyzers, the reference clock frequency being different from each of the communications protocol clock frequencies (Par. 0029, 0031, 0041-0042; Figure 1 and 2); capturing a plurality of data events, the captured data events collectively representing a plurality of communications protocols (0011-0012; 0054); and timestamping at least some of the captured data events, each timestamp being based upon the reference clock (Par. 0009, 0011-12, 0042).

As to claims 21, 22, 23, 24, and 25, these claims are rejected for the same reasoning as set forth in the rejection of claims 2, 3, 9, 4, and 11, respectively.

As to claim 26, Strong shows the reference clock is transmitted by one of the link analyzers (Figure 2; Par. 0041-0043).

As to claims 27, 28 and 29, these claims are rejected for the same reasoning as set forth in the rejection of claims 5, 13 and 14, respectively.

As to claim 30, Strong shows a computer program product for implementing a method for processing data events associated with a multi-protocol communications

system (abstract; Par. 0027, 0032), the computer program product comprising: a computer readable medium carrying computer executable instructions for performing the method, wherein the method comprises: capturing a plurality of data events, the captured data events collectively representing a plurality of communications protocols (0011-0012; 0054); and timestamping at least some of the captured data events, each timestamp being based upon a reference clock having a frequency that is based upon a plurality of communications protocol clock frequencies (Par. 0009, 0011-12, 0042).

As to claims 31, 32, 33, 34 and 35, these claims are rejected for the same reasoning as set forth in the rejection of claims 2, 3, 9, 4 and 11, respectively.

As to claim 36, Strong shows the data events captured in response the occurrence of a predetermined event (Par. 0017).

As to claims 37, 38, 39 and 40, these claims are rejected for the same reasoning as set forth in the rejection of claims 5, 14, 6 and 13, respectively.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Muntz et al. (US 5896427) – note abstract;

Dudziak et al. (US 2002/0136232 A1) – note abstract;

Wall et al. (US 6507923 B1) – note abstract;

Borchew et al. (US 7173943 B1) – note abstract;

Hansen et al. (US 6269136 B1) – note abstract;

Strong et al. (US 6335931 B1) – note abstract.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Redentor M. Pasia whose telephone number is 571-272-9745. The examiner can normally be reached on M-F 7:30am to 5:00pm EST, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on (571)272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Redentor Pasia

DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600